

73. (Amended) The receptor of Claim 70, wherein [said receptor has a preference for UTP over UDP] in the presence of UTP and UDP, the receptor presents a functional response to lower concentrations of UTP than to UDP or an increased response to similar concentrations of UTP than UDP.

B3
sub D20
74. (Amended) An isolated nucleic acid molecule encoding a receptor which has at least a two-fold preference for pyrimidine nucleotides over purine nucleotides, wherein said receptor has an amino acid sequence having more than 60% homology with the DNA sequence shown in SEQ ID NO:1, wherein in the presence of pyrimidine nucleotides, the receptor presents a functional response to lower concentrations of pyrimidine nucleotides than to purine nucleotides or an increased functional response to similar concentrations of pyrimidine nucleotides than to purine nucleotides.

75. (Amended) The isolated nucleic acid molecule of Claim 74, wherein said nucleic acid molecule is cDNA[or genomic DNA].

B4
sub D30
80. (Amended) An antisense probe having a sequence fully complementary to an isolated nucleic acid molecule encoding a receptor which has at least a two-fold preference for pyrimidine nucleotides over purine nucleotides, wherein said receptor has an amino acid sequence having more than 60% homology with the DNA sequence shown in SEQ ID NO:1, wherein in the presence of pyrimidine nucleotides, the receptor presents a functional response to lower concentrations of pyrimidine nucleotides than to purine nucleotides or an increased functional response to similar concentrations of pyrimidine nucleotides than to purine nucleotides [nucleic acid probe comprising at least 15 nucleotides capable of specifically hybridizing to a unique sequence included within the nucleic acid molecule of Claim 73, so as to prevent translation of its mRNA molecule].

B5
sub D40
84. (Amended) A method for determining whether a ligand can activate a receptor having at least a two-fold preference for pyrimidine nucleotides over purine nucleotides, wherein said receptor has an amino acid sequence having more than 60% homology with the amino acid sequence shown in SEQ ID NO:2, comprising the steps of:

preparing an extract from cells expressing the receptor;
isolating a membrane fraction from said extract;
contacting said membrane fraction with said ligand; and
assaying said membrane fraction for increased receptor activity, wherein increased activity indicates that said ligand is an activator of said receptor, wherein in the presence of